Texas Agricultural Extension Service
The Texas A&M University System

How To Select A Wheat Variety

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Farmers can have a great influence on potential yield and the risk involved in producing a wheat crop by spending some time in selecting the variety or varieties of wheat to be planted. As much of the risk of wheat production is associated with heading date, tolerance to winter kill, disease resistance and resistance to environmental stresses, wheat farmers can greatly diversify their risk by selecting several wheat varieties rather than that one "best" variety. The following are some criteria that should be used in variety selection:

Yield

Yield integrates the resilience of wheat germplasm to the many variables which make a wheat a wise choice for a given production area. Consistent yield over more than one crop year gives the farmer a much better estimate of the range of stress tolerances available within a given variety. Choose wheats that perform well over 2 or 3 years, and over a fairly wide range of environments. Use university yield trials, county agent strip tests, or other reliable variety tests to help make this decision. Remember that looking at stable performance over a wide range of environments may be you best information over how a variety will perform over different cropping years. Be cautious of varieties which might have a high 3 year yield average but are low in the current year, as this may reflect a change in disease resistance.

Disease Resistance

Genetic resistance to prevalent diseases is one of the most important properties in selecting a wheat variety. In the High Plains, resistance to wheat curl mite is an important indicator of potential injury due to wheat streak mosaic virus. While good resistance is not available to Barley Yellow Dwarf Virus, a range of tolerance is recorded between varieties. Leaf rust resistance is of great importance over the eastern half of the state. Leaf rust resistance is a moving target due to great adaptability of this organism, so reevaluate this characteristic annually. Look for resistance to septoria and powdery mildew in soft red winter varieties.

Insect Resistance

The main tool a farmer has for reducing loss from Hessian fly is varietal resistance. In infested areas, pay close attention to this detail, particularly in early planted wheat. Some wheats have varying levels of greenbug resistance, with biotypes of the aphid being of great importance. Look for this an inex-

pensive means of managing an important pest. Varieties with wheat curl mite resistance are of great importance in areas with problems from wheat streak mosaic virus.

Maturity

In high stress environments, varieties with early heading dates frequently escape late season stress and yield more. This is a trade off, with enhanced risk of spring freeze injury due to early bloom. Select varieties with a range of heading date, and do not concentrate all production with one maturity.

See our website at: **http://soil-testing@tamu.edu**

Forage Potential

Due to great variation in environmental conditions between years, total forage yield and individual variety performance vary more between years than between varieties. If forage is an important component of wheat, look for varieties with early emergence and also consider clipping trial data which may be available to you. Less forage data is available than grain performance data, making this a more difficult consideration.